



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,720	08/09/2002	Yoshiyuki Nakano	086142-0533	4229

22428 7590 02/03/2005

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

SPISICH, GEORGE D

ART UNIT	PAPER NUMBER
----------	--------------

3616

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/064,720

Applicant(s)

NAKANO ET AL.

Examiner

George D. Spisich

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 6 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 7, 8, 10, 11 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 42 27 780 A1 (provided in Applicant's IDS).

DE '780 discloses a pretensioner for increasing the restraint force of a seat belt on an occupant comprising a connecting member (24) which is a cable/wire connected to a piston (22), the piston configured to be moved by pressure of a gas generated by a gas generator, a "bent" tubular member having an approximately constant inner diameter and comprising a linear sliding portion in which the piston is slidably fitted and a gas generator accommodating portion in which the gas generator is accommodated. The piston is configured to move entirely within the linear portion and the connecting member pulls the seat belt when the piston moves.

The gas generator is located offset from the axis of movement of the piston. The connecting member is inherently operatively connected to the seat belt and buckle so that when the piston moves the connecting member pulls the seat belt/buckle.

The tubular member of DE '780 includes what could be described as either an acute bend or a substantially perpendicular bend between the gas generator accommodating portion and the linear portion.

The tubular member includes a hole bored coaxially with the piston and the connecting member being positioned to pass through the hole.

The tubular member of DE .780 includes a bend and has an approximately constant inner diameter.

Claims 1, 3, 8-10,12-14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Wier (USPN 5,908,222) (provided with Applicant's IDS, though not listed on form-1449).

Wier, as shown in Figure 2, 3 and 5, discloses a pretensioner for increasing the restraint force of a seat belt on an occupant comprising a connecting member (14) which is a cable/wire connected to a piston (22), the piston configured to be moved by pressure of a gas generated by a gas generator or pyrotechnic propellant, a "bent" tubular member having an approximately constant inner diameter and comprising a linear sliding portion (at least initially) in which the piston is slidably fitted and a gas generator accommodating portion in which the gas generator is accommodated. The piston is configured to move entirely within at least this initial linear portion. Examiner also points to Figures 3 and 5 of Wier that show other embodiments having linear portions in which the piston slides.

This bent member would be considered to be an obtuse bend. Although the linear sliding portion initially starts out straight, it should also be understood that curvilinear (as shown by Wier) would also properly be described by the term linear as this path is a type of linear. The gas generator is located offset from the axis of movement of the piston since the gas generator portion remains on an axis that is eventually offset from the axis of movement of the piston as the pistons travels. With respect to the pyrotechnic propellant (42) this is equivalent to a gas generator. The connecting member is operatively connected to the seat belt and buckle so that when the piston moves the connecting member pulls the seat belt/buckle.

Wier shows a piston having a plurality of balls (22) and an inclined surface (20) wherein the balls are then forced against the inside of the tubular member to limit movement of the piston in a single direction.

The linear portions and the gas generator accommodating portion of the bent tubular member are integrally formed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 42 27 780 A1 (provided in Applicant's IDS).

The linear portion and the gas generator accommodating portion of the bent tubular member of DE '780 are shown, but not integrally formed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the portions of DE '780 integrally, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

### ***Response to Arguments***

With respect to Applicant's argument that DE '780 (Prinz) does not disclose a tubular member in which a piston moves and that has "an approximately constant diameter", Examiner disagrees and maintains the rejection. Examiner notes that Applicant's invention is not shown to have a constant diameter (as seen in Fig. 4a and 4b) throughout the entire tubular member and therefore, and the term "approximately" would be broad enough to include the inner diameter variations of DE '780. Furthermore, to meet claims 1 and 10, the member of DE '780 must only possess an approximately constant inner diameter over a particular portion (such as the linear and

bent portions) and the piston may be configured to move entirely within the linear portion.

With respect to Applicant's argument that Wier does not disclose "the piston is configured to move entirely within the linear portion", Examiner disagrees and maintains the rejection. The phrase "configured to move entirely within the linear portion" is sufficiently broad such that this limitation is met by (1) a piston that has its entire movement within a linear portion or (2) a piston that moves through the whole linear portion. The initial starting portion of Wier is a linear portion through which the piston is "configured to move entirely within". Examiner also points to Figures 3 and 5 of Wier that show other embodiment having linear portions in which the piston slides.

### ***Allowable Subject Matter***

Claims 5 and 6 are allowed.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Terasaki (USPUB 2004/0212188).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (703) 305-6495. The examiner can normally be reached on Monday-Friday 9:30 to 7:00 except alt. Friday.

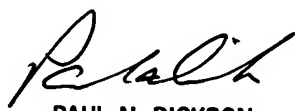
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George D. Spisich  
January 31, 2005



 2/2/05  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600